

The Relationship Between Consciousness, Interaction and Language Learning

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This paper looks at the relationship between consciousness, language learning, and social interaction from an ecological perspective. I argue that consciousness and language are integral parts of the human ecology, i.e. that they can be defined in terms of social activity and relationships among people, as well as in terms of mental operations or cerebral processes. Several levels of consciousness are discussed, from both a cognitive and a social perspective. Language, especially in the form of social interaction, is related to consciousness and learning via an analysis of several transcribed data extracts from different settings. I conclude that our interactions with others constantly provide pedagogical moments or learning opportunities. For teachers this means that interactions with learners in classrooms should allow learners to be perceiving, thinking, acting, and interacting persons, rather than passive receivers of knowledge.

Yes, it's my mouth which gives me ideas.

— How?

It's when I talk my mouth helps me to think.

- But don't animals have thoughts?

No, only parrots a little bit, because they talk a little.

(Piaget, 1951, quoted in Beard, 1969: 83)¹

Introduction

This paper is an attempt to look at the relationships between consciousness, language learning, and social interaction from an ecological perspective. The term ecology was invented by Ernst Haeckel in 1866, to refer to the study of the relationships between an organism and all other organisms with which it comes in contact (Arndt & Janney, 1984: 94). The term ecology has since been applied to language (Haugen, 1972), human development (Bronfenbrenner, 1979), and other areas of the social sciences (Bateson, 1979; Reed, 1996). I will argue that consciousness and language are integral parts of the human ecology, i.e. that they can be defined in terms of social activity and relationships among people, rather than as mental operations or cerebral processes. From an ecological perspective, learning (or language development) does not mean the transmission of rational facts or routines from teachers into learners' brains, but rather participation in processes that lead to higher or better processes, however defined by society or the individual.

I will deliberately take as broad a view as possible of consciousness, all the way from merely being alive to deliberate and purposeful action, partly to counterbalance the common practice of associating consciousness with explicit

knowledge of grammatical rules and formal analyses, and partly to enable a more fine-grained understanding of the notion of awareness. Similarly, I will take a broad view of language learning, ranging from first-language development in childhood, to foreign-language learning in schools (I will use learning and development interchangeably, to emphasise this broad perspective). My message, by examining this broad panoramic view, is to propose that in all aspects of language development it is important that consciousness (in all its variety of manifestations) and interaction are promoted to their fullest and richest extent. This may seem a rather mild and obvious piece of advice: which educator would wish to contest it at this general level? However, it will become clear that an emphasis on the organic, ecological nature of language development may have a strong effect on educational research, on what we count as relevant evidence, and on how we conceptualise learning and teaching processes.

My account will be largely programmatic, but I will use several transcribed extracts of interaction to illustrate my main points. In line with my wide-ranging purpose, the data will be taken from a variety of contexts, both instructional and non-instructional, including adults and children. There will be nothing to be proved or demonstrated, but there will be suggestions to construct research (action research and case study research, primarily) which takes into account all the personal, social, and physical elements that comprise the developmental ecology, with the notion of activity at the core of the process (Bronfenbrenner, 1979; Cole, 1996; Reed, 1996).

To begin with I would like to present a puzzle, in the form of a small neighbourhood incident. As you read this exchange, try to imagine what the context might be, who the participants are, and what the roles are that they play on this occasion.

Extract 1

- 1 **A:** Don't you need protective pads?
- 2 **B:** No .. I never fall
- 3 **A:** Don't say that - ... never say never
- 4 **B:** ... OK ... I don't ever fall.

Most people are able to make several sensible claims about this small conversation, even though it has been lifted out of its context. For instance, many predict with some confidence that A is an older person (an adult, probably), and B a younger one (a child). Closer inspection reveals that questions about a potential need, the disapproval this may signal, and the giving of advice (including conventional wisdom in the form of proverbs or idioms such as 'never say never') are, in Western culture at least, readily attributed to adults interacting with children. Further, the clues 'protective pads' and 'falling' often bring to mind well-known activities that involve a risk of scrapes and bruises unless protection is provided in the form of pads covering knees, elbows, and other vulnerable parts. Thus, many interpreters think of acrobatic activities that children like to engage in, and for which protective gear is usually recommended if not required (though often ignored, as in this case, in the face of adult disapproval). Common examples of such activities include rollerblading and skateboarding, the former

of which is the case here. Summing up, A is an adult who answers the door and sees a 10-year-old neighbour boy tottering about on his new rollerblades, who has come to ask if A's son can come out to play. A offers some indirect advice on the advisability of using protective pads, which B rejects because of his self-proclaimed dexterity.

What does this example have to say about the topic of this paper: the relationships between consciousness, language learning, and social interaction? As I hope to show in the following pages, the circumstances of ordinary language use can give significant clues to the organic interdependence between language learning and social interaction. I will use some everyday data from outside and inside classrooms to show how language learning might come about through the thought and action of learners as they interact with other people. And some of these learners are 'learners' only in an incidental and hypothetical sense, since they are neither engaged in deliberate learning activities nor are they being taught by teachers who have entered into interaction with them for teaching purposes.

The task of understanding language learning is, conceptually and methodologically, a difficult one. I take full knowledge of the common observation that teaching does not necessarily imply learning, and that learning does not imply teaching. In everyday terms this means that someone can be teaching without any learning happening, and that someone may be learning even though no teaching has taken place. I do not conclude from this quite common observation that teaching never promotes learning, but I do conclude that teaching-learning settings (such as classrooms) are not necessarily the only (or even the most likely, some cynics might say) places to find instances of learning. I suggest that we must understand learning before we can teach. And it is not possible to understand learning by investigating teaching. Nor is it possible to understand failure to learn solely by examining teaching practices. This would only be possible if we already knew what the 'right' teaching practices were, and this is exactly what we do not know. Thus, we can only study teaching in reference to learning, and we can only understand teaching if we understand learning.

In the following discussion, I will return to Extract 1 in order to examine it from the consciousness-learning-interaction perspective. I will use it to illustrate various views and definitions of consciousness, ending up with a view of consciousness as a social construct, closely intertwined with language (also defined as a social construct). I will then examine various other extracts from different settings to see how consciousness might relate to learning, ending up with some recommendations for teachers and speculations for further research.

What is Consciousness?

Consciousness (and language, as well as of course many other concepts) is not a single object or a unitary construct. Paraphrasing Wittgenstein's comment on the word 'think', we should not expect consciousness to have 'a unitary employment' (Armstrong & Malcolm, 1984: 69; van Lier, 1996: 97). It is possible to identify many layers, levels, and facets of consciousness. In this paper, I will examine two prominent, widely discussed treatments of consciousness: the traditional cognitive perspective and a less common perspective which sees consciousness as social and contextual (situated and distributed, to use two

fashionable terms). I will argue that for language learning (especially within a communicative and functional approach) the latter perspective is of considerable interest.

First, I will examine the traditional perspective of consciousness, which is a cognitive one. This perspective rests on several assumptions, e.g. that consciousness is individual rather than social, that there is a sharp distinction between mind and body, and that the mind is located in the brain).² In this perspective, it is common to identify several different types or levels of consciousness (see Schmidt, 1994; Bickerton, 1995; van Lier, 1996), such as:

- Level 1:** *Global ('intransitive') consciousness:* just being alive and awake. Of this, most basic level (which we share with all animals), Wittgenstein (1980: 165) posed the following question: 'You can pretend to be unconscious ... but conscious?' Clearly, unless we believe in sleep learning,³ this level is a basic prerequisite for any learning to occur at all.
- Level 2:** *Awareness* (or 'transitive' consciousness, consciousness of something): perceptual activity of objects and events in the environment, including attention, focusing, and vigilance. This level of consciousness is gradable in contrast to the previous one: there are various degrees and intensities of attention, alertness, vigilance, etc.
- Level 3:** *Metaconsciousness:* awareness of the activity of the mind; language awareness; knowledge about mental processes, metalinguistic awareness of formal linguistic properties, communicable knowledge (Karl Bühler's 'Regelbewusstheit', see Piaget, 1970, and Giddens's discursive consciousness, 1991).
- Level 4:** *Voluntary action, reflective processes, mindfulness:* deliberate and purposeful engagement in actions (Karl Bühler's 'Intentio', see Piaget, 1970).

These four levels of consciousness form a hierarchy, in the sense that each one presupposes the one(s) before it. As I shall argue later, they also coincide with increasing social interactivity, language development and awareness of others and self.

I will now return to Extract 1 (see page 129) and examine it in the light of these four levels of consciousness, and then try and make a link to learning.

Obviously, Level 1 is present. B (we'll focus on him, since he is the younger of the two, although I do not wish to suggest that older people are beyond learning) is clearly conscious in the sense that he's alive and awake. Level 2 is also present, since B is aware of his surroundings, perceives sounds and objects, and responds to language. With Level 3 things begin to get a little trickier. It is not clear if B has metalinguistic awareness in terms of rules of negation, proverbs and idioms, and so on. Nor is it clear to what extent he would be able to comment on his mental processes. However, I feel that, whether or not he has the specialised and technical knowledge to perform metalinguistic and metacognitive descriptions and analyses, is not the most important question here. He knows what he is doing, he will be able to remember it, and he may well be able to tell it to his friends as an anecdote or a joke. So, perhaps we should measure Level 3

consciousness by what B can do with the language, the ways in which he can deliberately and skilfully manipulate it. Such measurement is very difficult to do, since we are not used to judging metalinguistic and metaconscious knowledge without relying on explicit knowledge of grammatical structures, vocabulary, and the like. Yet, conscious control of language is more truly manifested in linguistic performance than in talking about linguistic performance (except, perhaps, in the form of stories and anecdotes, surely a very neglected source of metalinguistic data). Its essence is not so much contained in the mind as in linguistic activity, so that we need to look at interaction on the social plane to move ahead in the understanding of metaconsciousness, or awareness of the activity of the mind. It may thus be that Level 3 needs to be divided further into two sub-levels: 3(a) practical — including narrative — awareness, and 3(b) academic or technical awareness.⁴ Both are ‘meta’, in the sense that they refer to thinking about thinking, or language about language, or language about thinking, or thinking about language. Both are ‘discursive’, for the same reason. However, the latter uses technical, specialised vocabulary, and involves explicit knowledge of linguistic structures and systems, the former does not. I will return to this distinction later on, but would like to remark here that it is likely to be a very important one for language teaching and learning. Level 3(a) is manifested in language play and wilful manipulation of linguistic resources, as well as in language stories and anecdotes. In terms of our example, it is clear that B is conscious of language at level 3(a), if not level 3(b).

Level 4 is in some ways even trickier than the previous level. On the surface, B’s activity, including his linguistic activity, is intentional and purposeful. Yet, that is not saying terribly much. It becomes more interesting when we say that it also displays initiative and creativity. Better yet, it contributes actively and skilfully to the creation of a social event, a conversation, including a verbal witticism through which he indicates that he is a capable person. At the beginning of the episode, A may be hinting that B is clumsy and needs protection. B counters this by claiming a high level of skill (he’s bragging, we might say). Then A issues a warning, implying once again that B may be overestimating his dexterity. A uses a well-known saying to add authority to his message. Finally, this advice is swiftly and effectively countered by B, who uses a clever linguistic trick to indicate that A need neither worry nor give advice. Far more than words are exchanged here. Meanings do not sit in minds and are transferred in words, they are constructed in action. In addition, they may continue to grow and change long after the small episode itself is concluded. Indeed, the episode reverberates through this paper, and for all I know it may reverberate in some way in the rememberings of B, who must now be around 15 years old. Consciousness and interaction therefore resonate deeply with linguistic matter, so much so that they transform it, and are transformed by it.

Consciousness, Language and Social Interaction

Etymologically, of course, the term ‘consciousness’ is a knowledge word. This is evidenced by the Latin form, *-sci-*, in the middle of the word. But what are we to make of the prefix *con-* that precedes it? Look at the usage of the term in Roman Law, and the answer will be easy enough. Two or

more agents who act jointly having formed a common intention, framed a plan, and concerted their actions are as a result *conscientes*. They act as they do knowing one another's plans: they act '*jointly knowing*'.

Toulmin (1982: 64)

Most discussions of consciousness (Dennett, 1991; Flanagan, 1992 are recent examples) take a cognitive or rationalist perspective, locating consciousness in the thoughts, feelings, and minds of individual persons. Notable exceptions are several profound and influential thinkers from the earlier part of this century: Lev Vygotsky, Mihael Bakhtin, and Ludwig Wittgenstein who, each in his own way, saw consciousness as a social phenomenon born out of social activity.⁵ Thus, Vygotsky defined consciousness as 'the objectively observable organization of behaviour that is imposed on humans through participation in sociocultural practices' (Wertsch, 1985: 187; van Lier, 1996: 71).

Consciousness is intimately connected with language. This is not to say that language operates in isolation to produce consciousness, cognition, social interaction, and learning. Indeed, as Kress *et al.* argues convincingly (this issue), visual resources in the environment, including diagrams, gestures, pictures, and so on, play a vital part in the making of meaning and the creation of learning opportunities. From a semiotic perspective, language must be studied in relation to all other systems and sources of signs, and one of the most important goals of research is to understand how language relates to a multitude of sources of information in the learner's environment (Merrell, 1997; Oller, 1990; Poyatos, 1992). Language is not autonomous as a meaning-maker, it is one semiotic ingredient among others, though it clearly takes pride of place in most human contexts. Consciousness is the totality of efforts (and the perceived successes and failures of those efforts) of the individual to make sense of the world and his or her place in it. Since the person is a social being, relations and experiences with fellow-persons form the core and the engine of the construction of consciousness. We 'construct' our consciousness through language, and we continue to 'tend' and 'extend' it through language, even though the actual content of our soul, our mind, our morality and our learning comes from sight, vision, touch, smell and sound, as well as from what our genes have brought forward from our ancestors.

If consciousness can be seen as a social, dialogical, and historical construct, so can language. Even though prominent current linguistic theories, notably Noam Chomsky's universal grammar, regard language as a cognitive property of biological origin, there is also a long tradition of defining language in social terms (Bakhtin, 1981; Halliday, 1978; Hymes, 1974).

Looking at the four levels of consciousness mentioned above, it can be shown that language plays an increasing role as one moves up the hierarchy, and this coincides with an increase in social activity. The neuroscientist Ernst Pöppel tells us that consciousness 'stands always in a social context. Without others, there is no consciousness' (Pöppel, 1987: 171). Thus, he defines as conscious 'only those psychological events that are communicable' (Pöppel, 1987: 171).⁶ Clearly, one can communicate by means other than language (e.g. gestures, dance, painting, music, and so on; Kress *et al.*, this issue), but the predominant mode of human communication is no doubt language.⁷ Similarly, Chafe considers consciousness

‘as the crucial interface between the conscious organism and its environment’ (Chafe, 1994: 38). Going further, Chafe accords a ‘baseline status’ to ‘conversational consciousness’, that is, the conscious experience that accompanies ordinary conversation (1994: 41). It may be the case that we hold our consciousness aloft through interaction. At the same time we sometimes find that language becomes a prison for our consciousness, and we may seek to break out by finding higher or alternative forms of awareness through zen, yoga, the practice of solitude, etc.

For Vygotsky, consciousness begins as awareness of the environment, and is subsequently mediated through linguistic activity, and culminates in mental activity (the ‘higher mental functions’). As a result, Vygotsky argues that the origin of consciousness is social (Wertsch, 1985: 58). As Wertsch points out (*ibid.*, 59), Vygotsky’s view is quite similar to that of the pragmatist philosopher George Herbert Mead, who claimed that the social act is a precursor of consciousness. If we add that, in Vygotsky’s view, the essence of human social interaction is language (more precisely, speech), then it is clear that there must be a strong relationship between language and consciousness.

In sum, both consciousness and language can be defined from a primarily *cognitive* (intrapersonal) or *social* (interpersonal) perspective. In addition, language can be defined as essentially a *monological* or a *dialogical* system. In the former case, it is seen as having an autonomous structure which basically consists of the subsystems of ‘core linguistics’, i.e. phonology, morphology, syntax, and semantics. Linguistics programs and introductory courses tend to reflect this view, often adding as additional (but ancillary) topics sociolinguistics, discourse, language acquisition, among others. Figure 1 shows how these views of language and consciousness can lead to different ways of looking at what is presumed to

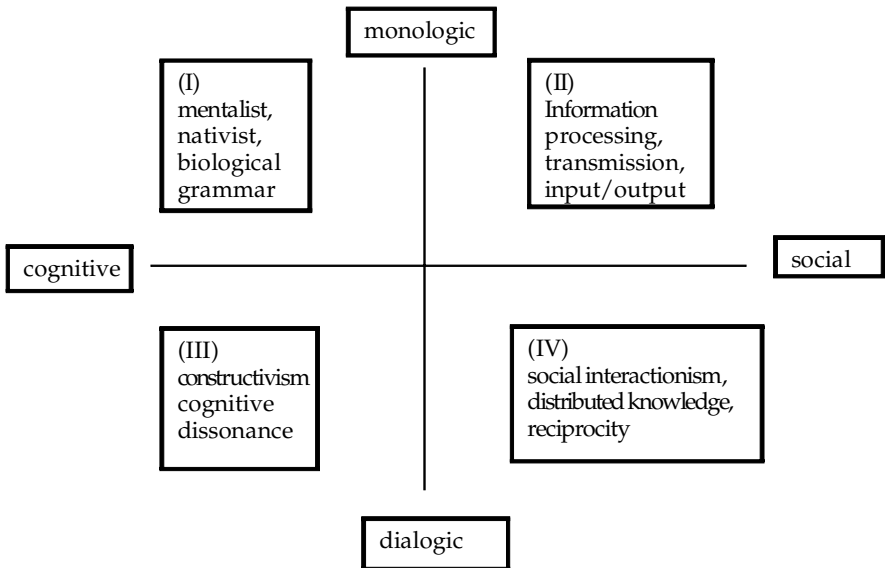


Figure 1 Four views of language and consciousness

be in the mind or in the environment, and what is presumed to be the role of 'the other' in what we learn and what we know, and know how to do.

The four quadrants created in this way, although certainly too crude to represent all the variety of thinking about the nature of language and consciousness, show some of the ingredients which underlie the most common theories with which we are familiar. The quadrants roughly capture the terminology familiar to applied linguists today, in the following way:

- (1) acquisition (implicit, subconscious, without focus on form; Chomsky);
- (2) transmission (input and output, explicit information, information processing; behaviourism, comprehensible input/output models, modified input);
- (3) transaction (constructivist, cooperative learning, communicative; Piaget, some interpretations of Vygotsky's Zone of Proximal Development);
- (4) transformation (interactionist, critical, exploratory; Vygotsky, Rommetveit, Bakhtin).

In practice, most teachers (and methods, insofar as it is still possible to speak of methods in the traditional sense — see Kumaravadivelu, 1994) will mix the various ingredients suggested here in different ways, coming up with particular strategies and activities that reflect their views of how language learning comes about.

Language Awareness and Metalinguistic Awareness

When we know something, we generally know that we know it, as Spinoza remarked a few centuries ago (see van Lier, 1996: 74). However, it is not always the case that we know *how* we know what we know. I might know for example how to recognise and tell apart thousands of different faces, but I have no idea how I am able to do that. Nor do I know how I manage to put names to some of the faces that I recognise, or how at times I fail to do so.

One of the most persistent problems with the notion of consciousness in second language education is the distinction between intuitive awareness of language and metalinguistic knowledge. As I mentioned above, Gombert (1992) distinguishes between *epilinguistic* and *metalinguistic* control, and I have made a similar distinction between *practical/narrative* and *academic/technical* control. Language awareness comprises both these levels of linguistic knowledge 3(a) and 3(b), in the previous section), which relate to each other in intricate and dynamic ways. However, rather than a straightforward distinction between two types of awareness, I propose multiple layers of language awareness, and among these, B's linguistic skill demonstrated in Extract 1 demonstrates all layers, at least up to the practical/narrative level.⁸ This view might be represented as in Figure 2.

In some cases, transformations from Level 2 to Level 3(a), and from 3(a) to 3(b), will be possible, and to some extent that is a natural result of becoming a mature language user, or at least one who has become literate or formally educated. However, I would suggest that there is much language knowledge that is unavailable — and indeed inappropriate — for transformation to other levels, and that all levels of language awareness persist even as metalinguistic knowledge becomes more sophisticated. The fact that this persistence of intuitive forms of awareness and knowledge is not generally noted is due to a heavy bias

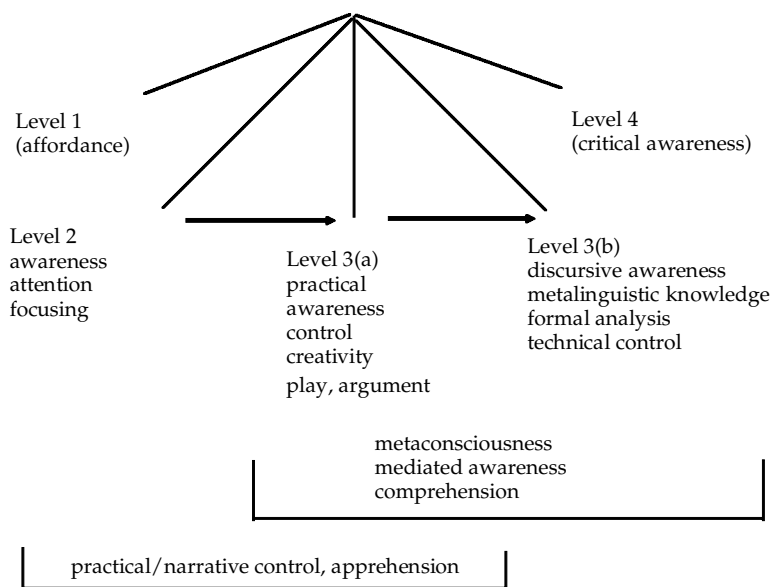


Figure 2 Levels of language awareness

in literate contexts and formal instructional settings in favour of that which can be talked about, elicited, assessed, and codified. Tests for metalinguistic knowledge rely on elicited grammaticality judgements, verbal protocols, labeling and naming exercises, and so on (Birdsong, 1989), so that the resulting data define the construct that was designed to elicit them. As in so many other cases, the construct underlying the test derives its justification from the data it constructs.

In our perennial discussions about implicit versus explicit learning, non-instructed versus instructed learning, acquisition versus learning, and other such dichotomies, we allow ourselves to define the conscious learner as one who is continually busy with — or has been subjected to — formal linguistic terminology, batteries of rules, explanations, and normative judgments of correctness. I would like to make a case for the equal, if not greater, importance of the intuitive feeling for language, the skilful control of creativity and convention, and the perceptual energy devoted to paying attention to one's own and others' language use. Therefore, language awareness does not require the ability to describe a linguistic feature using grammatical terminology, but rather the attempt to control and manipulate the material at hand. As R. J. Ayers says, 'if I want to know whether I can hop on one leg, I try' (Ayers, 1968). Subsequently we may talk about or reflect on our unidextrous exploits, but the essence of our awareness of knowledge (our knowing of learning, or knowledge of results) was in the doing (or trying), not in the commentary. As I mentioned earlier, Gombert's categories

might be turned around: what is really epiphenomenal is the ability to make metalinguistic comments.

In recent research at Lancaster University, Alderson *et al.* found little relationship between metalinguistic knowledge (as measured by identifying and correcting ungrammatical sentences, labelling parts of speech, and various other tests) and proficiency in French (Alderson *et al.*, 1998). Metalinguistic knowledge and French language proficiency appeared to be two different constructs. The above model of language awareness may offer some hints as to why that might be the case. The measurement of explicit metalinguistic knowledge may have as little to do with language awareness as with language proficiency, if it is the result of disconnected training in school, and if it is measured in solitary demonstrations of knowledge. In the same way, one might evaluate a carpenter by counting the number of tools in her toolbox, and by testing what she can say about them, but it is doubtful that anyone would claim that this would have much to do with identifying good or bad carpenters. However, this does not mean that tools and tool knowledge are of no use to a good carpenter.

The Lancaster study is highly significant in its findings that metalinguistic knowledge and language proficiency are relatively unrelated. However, it is even more significant for the questions it raises and the further research it points to. From the foregoing discussion on consciousness and language awareness, I would hazard a guess that, if metalinguistic knowledge is the tip of a solid language awareness iceberg, it will play a substantial role in language learning. However, if it is a tip without such an iceberg underneath, it will be insignificant and will melt away without leaving a trace. In sum, language awareness as the multilevel construct proposed above requires a dynamic balance between its elements: perception, practical, discursive and technical consciousness, and critical consciousness. Metalinguistic knowledge cannot be lastingly and useably established without the constant cognitive and affective nurturing provided by perceptual action and practical language use. It is to be hoped that further research can empirically tease apart the various components of awareness, so that their contributions to language development can be understood.

Consciousness, Self and Identity

A dimension that is often overlooked when consciousness is discussed in relation to language development is the dimension of self, identity, and voice. As consciousness develops and becomes more richly layered, it becomes more and more intertwined with language. At the same time, the conscious and language-using person begins to develop a sense of self. The first step in this process is the consciousness of the other, and the place of the other in the world. The next step is the development of self-consciousness, at two levels, 'me-consciousness' (the material *me*, or the *me* as known) and 'I-consciousness' (personal identity, or narrative self, the *me* as knower). Finally, self-consciousness enables the construction of identity, and the embodiment of language with voice (Bakhtin, 1981; Flanagan, 1992; Giddens, 1991; Hermans & Kempen, 1993; Neisser & Fivush, 1994). At the fourth level of consciousness, the level of intentionality and mindfulness, awareness and self come together to produce a sense of identity, or

an authentic person (in the sense of Csikszentmihalyi, 1990; Giddens, 1991; Sartre, 1957).

This journey towards identity is a result of consciousness which is of equal or greater importance to language development than the journey towards metalinguistic awareness. However, it makes little sense to speak of this or that aspect of language learning as being more important than the rest. In an ecological view of consciousness and language, all elements, great and small, play an equally crucial role in the processes of learning (Bateson, 1979; Bronfenbrenner, 1979; Gibson, 1979; Friedman & Carterette, 1996).

The examples below are selected to show language learning as a conscious, active, social process, one which involves contingent language use and constant attention — ranging from relaxed to vigilant — on the part of the learner. To learn language (first or subsequent) the learner must be attentive and conscious, focused on language in general as well as in quite specifically pinpointed ways. To achieve these kinds of attention, the second language experience must be engaging, i.e. captivating and relevant, whether it occurs in the classroom or not. Notions of self and social identity, and how they relate to the kinds of investment needed (Peirce, 1995) are crucial. One phenomenon that deserves close attention is the frequent observation of second language learners that they feel like a 'different person' when they speak a foreign language. Maintenance, loss, growth, and shifts in terms of self and identity may be important determinants of second language learning, even though in classrooms these matters may not always receive the attention they merit.

Learning at Large

I mentioned earlier that I would look for language learning in various settings, both in and out of classrooms. Extract 1, I suggested, afforded learning opportunities ranging from pragmatic and symbolic processes to syntactic and morphological manipulation.

My next extract is an example of learning — and possibly even teaching — in a non-instructional environment. Phillip and Lea are sitting in the car and are just talking. Lea is a native speaker of English, Phillip a bilingual English — German speaker.¹⁰ Both are four years old.

Extract 2

Lea: Your mami slept on the bed.

Phillip: My mami slept on the truck.

Lea: Your mami slept on the roof.

Phillip: My mami slept ... slipt on the car.

It seems that some language learning is going on in this extract, because Phillip gets to use a linguistic form which is closer to the target form. I'm sure that we can all imagine that a myriad of such learning opportunities occur throughout a child's language learning career. Perhaps they do not occur in this way when adults learn languages in classrooms or in society, and that is something we may want to think about, but in the social world of children such occasions are commonplace.

Two things should be clear at once: Lea is not deliberately teaching, and Phillip is not deliberately learning, yet Lea teaches (in the sense of modelling-in-context), and Phillip learns (cf. the 'pedagogic conversations' discussed in Roberts & Simonot, 1987). Further, Phillip clearly attends very closely to Lea's speech, otherwise he would not be able to modify his own language. He is aware of what he is saying, as well as of what Lea is saying. He notices that his verb 'sleeped' does not sound the same as Lea's 'slept', and he works to get his vowel in line. This means that he has noticed a gap between what he says and what Lea says. It also means that he assumes Lea's version is more accurate than his own, so that he is motivated to emulate hers. Why he assumes Lea's version is superior is unclear. It would be tempting to answer: 'Because Lea is a native speaker', but I feel we must be cautious here. For example, he may have heard *slept* before, and it may now have become salient enough to be noticed (in line with the notions of cue competition and cue strength in McWhinney & Bates's competition model, 1989).

Now, if we asked Phillip what was going on, he would not be able to say that he realises that 'sleep' is an irregular verb requiring a vowel change in the past tense. Yet, I don't think we can say that he was unaware of language, or that he was just learning by imitation. He is learning by actively listening to what others say, and by active reconstruction of his own language knowledge.

Another reasonable objection to this example is the apparently trivial nature of the learning event, if such it is. Phillip manages to lower the vowel quality in one word to midway between his previous vowel and the target vowel. Surely, one may ask, there is little reason to hold this up as a significant learning event? Once again, I would advise caution. On the one hand, it may indeed be a perfectly trivial little blip on the interlingual horizon, but on the other hand, there are several indications that it may be more than that. First, Phillip self-repairs, and thus he flags *sleeped* as a repairable word. When Phillip next hears someone say, 'I slept like a log last night', he may notice the irregular past tense again, connect this back to the word game he played with Lea, and thus take another step in language learning. Second, he moves from a regular past-tense rule to an irregular past tense, a well-known phenomenon in developmental sequence, when a previously overgeneralised rule is gradually stripped away from areas in which it does not apply. Third, the partial adjustment may lead to noticing other things (e.g. that *did you slept* is not OK), and to further restructuring of his linguistic system, and thus may have significant consequences, in the way that a small pebble can grow into a landslide.

We now leave Phillip and Lea to their language game, and turn to the second language classroom.

Language Learning Language

It is assumed almost unanimously these days that second language learning benefits from social interaction between the learner and other people. There is some debate about the relative benefits of interaction with native speakers versus interaction with fellow-learners, but that is an issue apart.

In the following extract, four learners (though only three contribute verbally

at this moment) are working on a task, which consists of producing a group essay on language learning.

Extract 3¹¹

- 1 L1: Can you fo- can you follow any conversation? Any people?
 2 L2: Sometime yes but ah... many times I can't
 3 L1: hm::
 4 L1: And what about you?
 5 L3: The same but depend of (who) the conversation, no?
 6 L2: Yah
 7 L3: Or the point, because sometimes is point very very easy, but the::
 depend of the theme
 8 L1: [si:m]
 9 L3: Theme
 10 L1: [si:m]
 11 L2: The topic
 12 L1: [si:m] ah! [si:m] ah yes [si:m] ... yeah yes=
 13 L2: ((chuckle)) ... (tema) topic
 L1: = yes [si:m] tee- aitch- ((spells)) ... theme ... theme
 14 L3: yes
 15 L2: yeah
 16 L3: Yeah theme
 17 L2: Okay ... next thing

Here L2 and L3 teach L1 the pronunciation of the word *theme*, which he presumably knows in its written form. The teaching is a brief side sequence within a larger interaction, it is jointly initiated, jointly constructed, and jointly concluded. We can argue that all four levels of consciousness play a role here:

- (1) the students are awake and alert;
- (2) the students are aware of each other's and their own language use;
- (3) the students attend to formal aspects of language, including definition, pronunciation, and spelling;
- (4) the students purposely engage in clarification of language through language, constructing meaning with a goal in mind.

Note that teaching and learning occur without a teacher present, and without expert–novice role relationships. This is an important observation: in much second-language acquisition research, included that which takes a Vygotskian perspective, it is tacitly or explicitly assumed that the privileged learning setting is the expert–novice dyad, where the expert is often a native speaker. This assumption springs from an information-processing perspective which assumes that language learning derives from input which is transmitted, comprehended, and processed. In contrast, the current perspective assumes that learning in this instance¹² is the appropriation of language through jointly constructed activity (Rogoff, 1993, 1995).

In the next and final extract, we encounter a class engaged in the official

business of teaching and learning. The teacher sets the task and tells the students what to do. The students follow along as instructed.

Extract 4

An ESL class. Making a list of countable/uncountable nouns on the black-board.

- 1 **T:** Countable and uncountable, very good. Nouns. All of them are nouns ... Okay. We need one person to help. Uh, Y? Can you help me? You come right here ... you'll be the writer ... the chief writer. Please ... think of some things that go on each side ... countable and uncountable nouns ... that you remember ... K, can you give us an example?
- 2 **L:** Uh, countable ... tea ...
- 3 **T:** Okay, tea, good. Write it down.
- 4 **L:** Wine.
- 5 **T:** What did you say? I'm sorry, I didn't hear you.
- 6 **L:** Wine
- 7 **T:** Wine. Okay. Some more things. R, can you think of one? On this side maybe?
- 9 **T:** Students. Very good. Okay ...

In this case, the first three levels of consciousness can be presumed to come into play, although for the learners Level 4, purposefulness and mindfulness, may not be utilised to any significant extent, since they do not at this point initiate language use and active participation of their own accord. They are prompted and guided by the teacher, and their contributions are brief and reactive. So, while the range of levels of consciousness may be engaged at the cognitive level, the depth of engagement may be limited. What this means for learning is unclear, though my proposal is that depth of engagement plays a crucial role (cf. comments on 'tuning in' by Roberts & Sarangi, 1995). Notice that we have a clear expert–novice role relationship here, and also that negotiation of meaning occurs in Turns 4–6. Yet, I am not convinced that these features have a privileged status here as instigators of learning opportunities. Further research of such teacher–learner activities, particularly looking for the types of results Slimani has called uptake (1989; see also Ellis, 1994), might be useful, especially when systematically and longitudinally compared with the other contextual patterns illustrated in the earlier extracts.

Conclusion

Consciousness can be looked at from both a cognitive and a social perspective. It relates in many complex ways to thinking, language, and identity, and its development is fuelled by social interaction. The accounts with which we are most familiar in second-language acquisition contexts tend to emphasise heavily the cognitive and individual aspects of consciousness, partly influenced by linguistic theories which locate competence in the brain of the individual, and learning theories which regard learning as the processing of inputs and outputs of linguistic matter which flows from knower to non-knower. I have suggested

that much can be gained from viewing consciousness from a much broader perspective, including particularly the social dimension.

It is clearly inaccurate to say that children learn their first language unconsciously and effortlessly. Even while they go about the business of playing, understanding the world, and finding their place in the speech community, they engage in countless acts of conscious learning, with a keenly perceptive stance, the application of deliberate effort, and the investment of their growing personal and social identities.

Learning a second language is in principle no different, though perhaps the metalinguistic aspect of conscious involvement plays a greater role for various reasons. It is by no means clear at what point such metalinguistic knowledge might become useless, or even detrimental. As I have suggested elsewhere (van Lier 1996: 77; see also Birdsong, 1989), metalinguistic knowledge can be brought to bear in positive ways on the exploitation of learning opportunities. This is shown in Extract 3. However, it may also be counterproductive, especially when it does not operate in synchronous fashion with the other elements of consciousness, especially perceptual focus and interactional purpose.

What is the moral of this story? It seems that teaching and learning go on continually in our interactions with others. We could call instances of such teaching/learning in everyday life learning opportunities, or pedagogical moments. They either just happen, as in the case of B in Extract 1 or Phillip in Extract 2, or they can be invited or offered, as in the case of the learners in the group task. Finally, they can be imposed by parents or teachers, as in Extract 4.

If we, as teachers, want to learn from the successes of pedagogical moments in everyday life, and perhaps create analogous moments in our classes, we should keep in mind that we do not need to take away the element of consciousness or deliberation. It will be very useful to study, continually and closely, our interactions with the learners in our classrooms. In this way we can bring to light opportunities to reduce the imposition of teaching (or teaching by imposition, or *fiat*), and to allow learners to be the perceiving, thinking, acting, and interacting persons that they have the right to be. When they are conscious learners in the full sense of the word, it is likely that opportunities for learning will be increased, since then the learners themselves are in charge of creating them.

The methods of such research are different from the controlled or semi-controlled process-product studies we are familiar with. We might call them ecological methods, in that they take account of the full context as it dynamically enables or constrains the learning process. An example of such research is Bronfenbrenner's 'PPCT' model (person-process-context-time, see Bronfenbrenner, 1993), which systematically and longitudinally links action to environment (using both qualitative and quantitative methods). Such research, examples of which are discussed in, e.g. Wozniak & Fischer, 1993, is relatively rare in the field of second language (though see Peirce, 1995; Rampton, 1995; and the studies by Kress *et al.* and Roberts in this issue), but it allows us, to adapt a memorable phrase of Bronfenbrenner, to avoid limiting ourselves to studying the strange behaviour of learners with strange native speakers in strange settings for the briefest possible periods of time (Bronfenbrenner, 1979: 19; see also Brown, 1994).

Notes

1. Piaget is quoting from a conversation with a six-year-old child. As Beard comments, 'Until language is internalized in thought, 'thinking' is tied to the activity of speaking' (Beard, 1969: 83).
2. In Noam Chomsky's work on universal grammar, the mind *is* the brain at some abstract level. In Chomsky (1986), for example, he consistently uses the term 'mind/brain', treating it as a single entity.
3. The Danish comedian Victor Borge said that he learned Japanese by putting a tape underneath his pillow at night. He added that there was one drawback to this method: he could only speak Japanese when he was fast asleep.
4. Referring to a similar distinction, Gombert (1992) uses the terms epilinguistic and metalinguistic, respectively. However, I think it would be more accurate to call the academic awareness epilinguistic, since practical awareness must be considered the basic and most pervasive form of language awareness (outside of prescriptive grammar classes, in any case).
5. One should also mention the views of C.S. Peirce, and of psychologists such as William James, Sigmund Freud, and Karl Bühler, but a detailed discussion of their work is not possible here.
6. Presumably, Pöppel is limiting his definition of consciousness to the upper levels, as is quite common in the literature.
7. Not everything we communicate is conscious, e.g. we may communicate embarrassment, anger, etc. Even in language we often communicate things we are not conscious of.
8. One might conceptualise the resulting levels of awareness in terms of Peircean signs, moving from chiefly iconicity (affordance, see Gibson, 1979; van Lier, 1996), to chiefly indexicality (control, interactive skill), to chiefly symbolicity (knowledge, analysis, critical action). Each level implies a transformation of awareness, not just an addition of other elements. (For other examples of Peircean triads, see van Lier 1996. See also Merrell, 1997.)
9. There is no proof of the occurrence of learning, but such proof may in any case remain elusive. However, contextual research may be usefully complemented by laboratory research (Hulstijn & DeKeyser, 1997), since controlled studies may allow for stronger inferences about specific phenomena.
10. I am grateful to Birgit Heine for sharing these data.
11. Left square brackets indicate onset of overlapped turn or back channel. A word inside square brackets indicates phonetic transcription. An equals sign indicates continuation of an earlier turn.
12. This does not preclude other configurations for learning, including the expert–novice dyad (e.g. Rogoff's apprenticeship, and guided participation (Rogoff, 1993, 1995). My main point is that nothing would be gained, and much would be lost, by interpreting the process in Extract 3 in expert–novice terms.

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